

Gene filter for polyps

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	L1	L2	L3	L4	LC1	LC2	LC3	LC4	U1	U2	U3
Genes present in at least 4 'normal' tissues, two each upper and lower intestine, absent in polyps												
EST: mz95f11.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone 721197 5', mRNA sequence. (from Genbank)	aa266897_at											
EST: mz46g09.r1 Barstead mouse pooled organs MPLR84 Mus musculus cDNA clone 716512 5', mRNA sequence. (from Genbank)	aa265119_s_at											
Mus musculus gene for insulin-like growth factor binding protein-1	X67493_g_at											
Caspase 7	u67321_s_at											
Purkinje cell protein 4	X17320_s_at											
EST: ms95a05.r1 Soares mouse 3NbMS Mus musculus cDNA clone 619280 5', mRNA sequence. (from Genbank)	aa175794_s_at											
No info for gene	ET63085_f_at											
Genes present in at least 4 'polyp' tissues, two each upper and lower intestine, absent in 'normal'												

Figure 1A

Table 6 of 66

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	U1	U2	U3	U4	U5	U6	U7	U8	U9	U10	U11
EST: mz97g06.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone 721402 5', mRNA sequence. (from Genbank)	AA267281.1_at											
Sim. to TRANSLATION INITIATION FACTOR EIF-2B-EPSILON SUBUNIT	Msa.8133.0_s_at											
Fibroblast growth factor Inducible 16	U42385_s_at											
Sim. to GLYCOGEN PHOSPHORYLASE, BRAIN FORM (EC 2.4.1.1)	Msa.6220.0_s_at											
Mus musculus TRAF family member associated NF-kappa B activator (TANK) mRNA	u51907_s_at											
EST: Mus musculus 3.5-dpc blastocyst cDNA 3'-end sequence, mRNA sequence. (from Genbank)	C79015_rc_at											
Sim. to PROHIBITIN (B-CELL RECEPTOR ASSOCIATED PROTEIN 32) (BAP 32)	Msa.24245.0_f_at											
EST: vb41a02.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone 751491 5', mRNA sequence. (from Genbank)	AA396006_at											
Mus musculus Cdk4 and Cdk6 inhibitor p19 protein mRNA	u20497_s_at											
EST: Mus musculus 3.5-dpc blastocyst cDNA 3'-end sequence, mRNA sequence. (from Genbank)	c77069_rc_s_at											

Figure 1B

FIGURE 1C

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	LC1	LC2	LC3	LC4	U1	U2	U3				
Mus musculus CDK-activating kinase assembly factor p36/MAT1	U35249_s_at											
EST: mo35b11.r1 Life Tech mouse embryo 13 5dpc												
10666014 Mus musculus cDNA clone 555549 5', mRNA sequence. (from Genbank)	aa111610_s_at											
EST: Mus musculus 3.5-dpc blastocyst cDNA 3'-end sequence, mRNA												
sequence. (from Genbank)	C81595_rc_at											
Myosin Ic												
EST: Mus musculus 3.5-dpc blastocyst cDNA 3'-end sequence, similar to R.norvegicus DNA												
sequence for LFB1/HNF1 promoter, mRNA sequence. (from Genbank)	C79518_rc_at											
Mouse E46 mRNA for E46 protein::BRAIN PROTEIN E46												
EST: M.musculus expressed sequence tag MTEST707, mRNA sequence. (from Genbank)	Z31269_s_at											

Figure 1C

FIG. 10

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	L1	L2	L3	L4	LC1	LC2	LC3	LC4	U1	U2	U3
Sim. to ENDOSOMAL P24A PROTEIN PRECURSOR (70 KD ENDOMEMBRANE PROTEIN) (PHEROMONE ALPHA- FACTOR TRANSPORTER) (ACIDIC 24 KD LATE ENDOCYTIC INTERMEDIATE COMPONENT)	Msa.24715.0 _s_at		A	A	563 P	420 P	A	A	A	529 P	A	129
Mus musculus mCPE-R mRNA for CPE-receptor	AB000713_g_1 at											
Mus musculus cdc2(CDC28- like protein kinase 3 (Cik3) mRNA	AF033565_at	519 P	746 P	A	A			A	A		A	814 P 384
Small inducible cytokine A12	u50712_s_at	648 P	957 P	A	A			A	A	903 P 763 P		
Mus musculus protein- tyrosine phosphatase mRNA EST: mr11h07.r1 Soares mouse 3NbMS Mus musculus cDNA clone 597181 5', mRNA sequence. (from Genbank)	AF013490_s_1 at	921 P	1150 P	A	A			A	A		A	1371 P 642
EST: mu22e08.r1 Soares 2NbMT Mus musculus cDNA clone 640166 5', mRNA sequence. (from Genbank)	aa145148_s_1 at	1353 P	1546 P	A	A			A	A	1044 P 1530 P 659		
	aa197627_s_1 at	567 P	2040 P	A	A			A	A		A	924
Laminin, beta 3	U43298_s_at	1151 P	1698 P	1636 P	A							
Mast cell protease 1	X68803_s_at	A	A	2781 P	2051 P			A	A	1858 P	A	1612 P 227 629

Figure 1D

FIG. 1E

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	L1	L2	L3	L4	LC1	LC2	LC3	LC4	U1	U2	U3
Mus musculus non-receptor protein tyrosine kinase Ack mRNA	aa119775_s_at											
EST: vc06f02.r1 Soares mouse lymph node NbMLN												
Mus musculus cDNA clone 765723 5', mRNA sequence. (from Genbank)	aa277082_g_at											
Mus musculus major histocompatibility locus class III region: butyrophilin-like protein gene, partial cds; Notch4, PBX2, RAGE, lysophatidic acid acyl transferase-alpha, palmitoyl-protein thioesterase 2 (PPT2), CREB-IP, and tenascin X (TNX) genes; and CYP21OHB pseudogene, complete sequence	aa270355_s_at											
Non MHC restricted killing associated	L19057_s_at											
EST: vc06g10.r1 Soares mouse lymph node NbMLN												
Mus musculus cDNA clone 765762 5', mRNA sequence. (from Genbank)	aa275330_s_at											
Mus musculus C3H cytochrome P450 (Cyp1b1) mRNA	u03283_s_at											
Mus musculus 80kDa m-calpain subunit (calp80) mRNA	d38117_s_at											

Figure 1E

2825.2018-001

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	LC1	LC2	LC3	LC4	LC1	LC2	LC3	LC4	U1	U2	U3
EST: EST03281 Mouse 7.5 dpc embryo ectoplacental cone cDNA library Mus musculus cDNA clone C0033C02 3' similar to M.musculus VE-cadherin gene (lambda 5 clone), score = 1195, mRNA sequence. (from Genbank)	aa408463_s_at											
EST: mc88c08.r1 Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA clone 355598 5', mRNA sequence. (from Genbank)	w48388_g_at											
EST: mz98g09.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone 721504 5', mRNA sequence. (from Genbank)	aa266888_s_at											
Thymidine kinase 1	m19438_s_at											
Nucleolin	X07699_s_at											
RAN GTPase activating protein 1	u08110_s_at											
Sim. to GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUB	Msa.16667.0_f_at											

Figure 1.F

1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Accession	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11
EST: mv22d10.r1 GuayWoodford Beier mouse kidney day 0 Mus musculus cDNA clone 655795 5', mRNA sequence. (from Genbank)	aa239576_s_1 at	278 P	175 P	299 P								
EST: m181b04.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone 636271 5', mRNA sequence. (from Genbank)	aa189313_s_1 at	421 P	403 P	230 P	318 P							
EST: vq81h09.s1 Knowles Solter mouse 2 cell Mus musculus cDNA clone 1108769 5', mRNA sequence. (from Genbank)	aa647562_g_1 at	863 P	1400 P	1151 P	1441 P							
Mus musculus alpha 1 type I collagen gene, partial cds and 3' flanking region::Procollagen, type I, alpha 1	u08020_f1_at	1491 P	1336 P	860 P	A							
Mouse mRNA for epiregulin IMMEDIATE EARLY PROTEIN GLY96	D30782_s1_at X67644_s1_at	239 P 314 P	453 P 260 P	363 P 556 P	427 P 1216 P							
EST: m131f05.r1 Soares mouse 3NbMS Mus musculus cDNA clone 599073 5', mRNA sequence. (from Genbank)	aa172851_s_1 at	2293 P	3087 P	4035 P	2665 P							

Figure 1 G

14	15	16	17	18	19	20	21	22	23
UC1	UC2	UC3	UC4	Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps	
A	1060 P	A	447 P	A	4	688	212.1320344	753.5	433.4564569
A	539 P	A	447 P	964 P	5	686.5	231.2239174	650	275.7952139
A	A	A	443 P	699 P	5	862.3333333	331.5333065	571	181.019336
A	1536 P	1741 P	1883 P	957 P	6	739	398.8082246	1529.25	407.2234235
A	503 P	550 P	262 P	296 P	7	593.3333333	164.8524593	402.75	144.8433061
A	756 P	902 P	370 P	446 P	7	745.6666667	118.373702	618.5	252.1818127
A	1780 P	1400 P	A	3096 P	7	4249.25	2818.113361	2092	890.0067415

Figure 1 H

Polyps in the Colon										
	14	15	16	17	18	19	20	21	22	23
	UC4	UC1	UC2	UC3	UC4	Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps
P 104 P		A	A	A		180.5	60.1040764	120.5	23.33452378	150.5
A 289 P		A	A	A		321.5	159.0990258	303.5	20.50609665	312.5
A 330 P		A	A	A		373	90.50966799	272	82.02438662	322.5
A A		A	A	A		456	272.9432175	271	67.88225099	363.5
P 390 P		A	A	A		433.5	53.03300859	309	114.5512986	371.25
P A		A	A	A		414.5	79.90306627	366	253.1442277	390.25
P A		A	A	A		777.5	120.9152596	530.5	183.1406563	654
A 542 P		A	A	A		780	677.4082964	582.5	57.27564928	681.25
A A		A	A	A		810.5	283.5498193	619.5	9.192388155	715
P 759 P		A	A	A		1149	852.7707781	548.5	297.6919549	848.75

Figure 1 I

	14	15	16	17	18	19	20	21	22	23
	UC1	UC2	UC3	UC4		Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps
P 576 P	A	A	A		A	1259	777.8174593	554	31.11269837	906.5
A A	A	A	A		A	857	73.53910524	1145	236.1736649	1001
A A	A	A	A	A	A	1682	678.8225099	1932.5	1174.504364	1807.25
A 2339 P	A	A	A	A	A	5218.5	620.1326471	2819	678.8225099	4018.75
P A	A	A	A	A	A	167.3333333	51.82984983	89.5	43.13351365	136.2
P 1195 P	A	A	A	A	A	211.5	96.87362902	175.6666667	89.57864329	190
P 490 P	A	A	A	A	A	320.5	54.44722215	397.3333333	105.8363517	366.6

Figure 1 J

	14	15	16	17	18	19	20	21	22	23
U4	UC1	UC2	UC3	UC4		Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps
P 595 P	A	A	A	A	A	491.5	101.1162697	417.6666667	252.161324	447.2
P 653 P	A	A	A	A	A	632.5	160.5132393	617	217.2487054	623.2
A 5 A	A	A	A	A	A	727.6666667	343.7009359	833	98.99494937	769.8
P 814.2	A	A	A	A	A	802.5	218.4959954	822	413.118627	814.2
P 1084 P	A	A	A	A	A	1035.5	161.9274529	1032.333333	367.236073	1033.6
P 1186.4	A	A	A	A	A	1349.5	4.949747468	1077.666667	436.4748943	1186.4
P 1123 P	A	A	A	A	A	1314.333333	736.7389859	1023.5	140.7142495	1198
P 1264.8	A	A	A	A	A	1495	299.5212847	919.5	979.3428919	1264.8
P 1609	A	A	A	A	A	2416	516.1879503	1071	683.2854455	1609

Figure 1, K

	14	15	16	17	18	19	20	21	22	23
U4	UC1	UC2	UC3	UC4		Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps
P 2714 P	A		A	A	A 5	1966.5	760.1397898	1761.333333	883.1224906	1843.4
P 3719 P	A		A		A 5	5575.666667	2866.201726	4153.5	614.4757929	5006.8
P 2722 P	A		A	A	A 6	133	9.539392014	221.6666667	100.4506512	177.3333333
A 196 P	A		A		A 6	551	175.8379936	458.3333333	254.4097744	504.6666667
P 444 P	A		A		A 6	725.5	78.48885271	414.5	150.529067	518.1666667
P 368 P	A		A		A 6	715	845.6997103	433.5	47.0496192	527.3333333

Figure 4L

	14	15	16	17	18	19	20	21	22	23
	UC4	UC1	UC2	UC3	UC4	Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps
P 519 P		A	A	A	A	760.5	92.63098834	741	220.5190846	747.5
P 373 P		A	A	A	A	1070	644.8813844	753	368.3150825	858.6666667
P 567 P		A	A	A	A	1483	472.8435259	680.3333333	105.9874206	1081.666667
P 1400 P		A	A	A	A	1658.666667	532.3244625	1183.666667	209.8340614	1421.166667
A 1301 P		A	A	A	A	2394.666667	523.1102497	1965.333333	683.7648231	2180
A 847 P		A	A	A	A	3473	813.9428727	1345	1014.261801	2409
P 2775 P		A	A	A	A	3706	1114.400287	2582.5	288.1301789	2957

Figure 1 M

	14	15	16	17	18	19	20	21	22	23
	UC1	UC2	UC3	UC4		Average Lower Colon	stdev Lower Colon	Average Small Intestine	stdev Small Intestine	Average Polyps
U4										
P 202 P	A	A	A	A	A	250.6666667	66.3651515	276.5	77.71100308	265.4285714
P 310 P	A	A	A	A	A	343	87.70784838	276	77.78817391	314.2857143
P 586 P	A	A	A	A	A	1213.75	266.642551	606.6666667	277.5776168	953.5714286
P 632 P	A	A	A	A	A	1229	328.8267021	927	745.4828413	1056.428571
P 275 P	A	A	A	A	A	370.5	95.47600047	307.25	72.49080401	338.875
P 363 P	A	A	A	A	A	586.5	438.9605145	351.75	149.0936507	469.125
P 1858 P	A	A	A	A	A	3020	750.392786	2223.25	438.7720555	2621.625

Figure 1N

40362063460

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stdev polyps	Average Normal Tissue	stdev Normal Tissue	Description
	720.75	281.1729895	Similar to Rat Opioid growth factor receptor, which regulates cellular renewal, wound healing. OGF inhibits pancreatic and squamous cell carcinomas.
	664.6	227.5902019	
	745.8	297.6771741	insulin-like growth factor binding protein 1, high affinity, expressed in liver, decidua, kidney and in amniotic fluid, regulator of apoptosis
			caspase 7, effector, cysteine containing aspartate-specific protease, CASP3 subfamily, stored in the mitochondrial intermembrane space and released into cytosol after appropriate apoptotic stimuli, promoting apoptosis, H3, isoform alpha, interacting with calpain during B cell clonal deletion by apoptosis
	1265.833333	545.7473469	Purkinje cell protein 4, rat PEP-19, neuron-specific polypeptide homolog
	484.4285714	172.9921551	gene, with homology to S100 calcium binding proteins, involved in the development of the central nervous system
	673	202.704218	
	3324.714286	2358.930952	

Figure 10

24 25 26 27

stddev polyps	Average Normal Tissue	stddev Normal Tissue	Description
50.849451			
93.196924			eukariotic translation initiation factor 2B,subunit 5,ubiquitously expressed (epsilon,82kDa)
91.507741			
194.36306			phosphorylase, glycogen catabolism, brain
102.36332			tumor necrosis receptor-associated factor ,TRAF-interacting protein, mediator of NFkB activation after induction by TRAF2. apoptosis Inhibitor?
155.79768			
190.76163			prohibitin (antiproliferative protein) potential tumor suppressor regulating E2F1 function
408.72515			
197.45548			cyclin dependent kinase 4 and 6 (CDK4/CDK6) inhibitor,p19,regulator of the cell cycle,passage through the G1 checkpoint,expressed primarily in hematopoietic tissues
626.21582			

Figure 1P

24 25 26 27

stdev polyps	Average Normal Tissue	stdev Normal Tissue	Description
606.35331			
219.1879			
796.45271			
1483.5728			myosin IC,unconventional,apparently non filamentous,homologous to mouse Myo1e, crypt cell marker
60.213786			
82.118816			
90.071083			

Figure 1 Q

26 27

26

25

24

stdev polyps	Average Normal Tissue	stdev Normal Tissue	Description
189.69502			
173.52723			carboxypeptidase E, metallo carboxypeptidase family, regulated secretory pathway sorting receptor, involved in the trimming of paired basic residues at the C terminus of prohormone-derived peptides, mutated in the obese fat mouse
254.64426			CDC-like kinase 3, with two alternatively spliced forms, one catalytically active and one inactive isoforms, interacting with and inducing the nuclear redistribution of SR proteins SFRS* (see symbols), widely expressed
312.06201			
272.00974			
342.67959			
549.28818			laminin 5 (kalin/nicein), beta 3 polypeptide, component of cutaneous basement membrane zone, expressed in stratifying squamous epithelium, downstream from E-cadherin
619.67306			chymase, mast cell, with a variant putatively involved in eczema
918.01934			

Figure 1R

Figure 1S

27

26

25

24

sfdev polyps	Average Normal Tissue	stdev Normal Tissue	Description
739.61733			Inhibits Ras-induced malignant phenotypes in fibroblasts ?? http://www.kfinder.com/member-search/getdoc.cgi?ord=5&searchid=1&have_local_holdings_file=1&local_journals_only=0
871.29369			
2192.8791			
80.193932			
202.07292			cytochrome p450, family 1 (aromatic compound inducible), member B1, expressed in ocular structures of the anterior uveal tract, possibly involved in the metabolism of substances active in the eye growth and differentiation
201.54346			
406.81822			calpain, large polypeptide 1, calcium dependent neutral cysteine proteinase, papain superfamily, mu type (not mutated in MEN1)

Figure 1S

24 25 26 27

stdev polyps	Average Normal Tissue	stdev Normal Tissue	Description
176.05312			In different types of epithelial tumours, cadherin expression is inversely correlated with invasiveness and metastatic dissemination
437.45293			hGAR1 is a component of H/ACA snoRNPs and telomerase in vivo
535.91778			Mus musculus cleavage and polyadenylation specificity factor 73 kDa subunit mRNA
445.69874			thymidine kinase 1, pyrimidine salvage pathway, soluble, putative up-regulated c-Myc target gene.
593.10168			nucleolin, major multifunctional nucleolar protein of exponentially growing cells, characterized by unique tripartite function within each domain, performing activities i.e. a specific DNA helicase and DNA-dependent ATPase, also acting as a sequence-specific RNA binding protein, an autoantigen, a component of B cell specific transcription factor, involved in ribosome biogenesis, cytokinesis, nucleogenesis, cell proliferation and growth, chromatin remodeling etc..
1426.5368			inhibits gtp exchange on ran. forms a ran-gtp-ranbp1 trimeric complex. increase gtp hydrolysis induced by the ran gtpase activating protein rangap1. may act in an intracellular signaling pathway which may control the progression through the cell cycle by regulating the transport of protein and nucleic acids across the nuclear membrane.
796.73684			guanine nucleotide-binding proteins (g proteins) are involved as a modulator or transducer in various transmembrane signaling systems. the beta and gamma chains are required for the gtpase activity, for replacement of gdp by gtp, and for g protein- effector interaction.

Figure 1 T

24	25	26	27
stdev polyps	Average Normal Tissue	stdev Normal Tissue	Description
68.397995			ubiquitin conjugating enzyme E2 variant 1, expressed as at least four isoforms, transcriptional activator of FOS promoter, underexpressed in hormone refractory prostate cancer, potentially involved in the control of differentiation and the entry of a larger proportion of cells in the division cycle and an accumulation in G2-M
84.533454			
408.08367			
583.072			collagen type I, alpha 1, fibril forming, putative downregulated c-Myc target gene. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10769639&dopt=Abstract Increased expression of heparin binding EGF (HB-EGF), amphiregulin, TGF alpha and epiregulin in androgen-independent prostate cancer cell lines.
85.4508			PRG1: a novel early-response gene transcriptionally induced by pituitary adenylate cyclase activating polypeptide in a pancreatic carcinoma cell line.
328.4076			
710.77944			

Figure 1U

FIGURE 1V

FIGURE 1V

1A	1H	1O
1B	1I	1P
1C	1J	1Q
1D	1K	1R
1E	1L	1S
1F	1M	1T
1G	1N	1U